

HPHT Treatment of Single Crystal CVD Diamond

P. Doering

Apollo Diamond, Inc., Sherborn, MA, USA

doeringp @apollodiamond.com

Keywords: single crystal CVD diamond, stress, annealing, optical properties

Single crystal diamond grown by the CVD technique has been demonstrated to possess outstanding properties compared to single crystal diamond from other sources. Many applications of single crystal diamond (such as gem stones and optical windows) are highly sensitive to its optical properties; specifically its optical absorption and distortion at the wavelengths of interest. One technique used to manipulate diamonds optical properties is HPHT treatments. In this presentation, we will discuss our experience in using these treatments on single crystal CVD diamond.